

PROGRAM DEVELOPMENT

PROCESS SUMMARY

The development of the Transportation Improvement Program includes the following steps and processes:

- Define Vision - Define the Board of County Commissioners' vision and expectations, and obtain endorsement for the TIP development process.
- Assemble Project Team - Establish a project team with the resources to execute the TIP development plan.
- Develop Public Involvement Plan - Provide a forum for meaningful public understanding and input into the program.*
- Review Existing Program - Define successful elements of the previous TIP and potential areas for improvement.
- Identify Candidate Projects - Establish initial list of projects.*
- Prepare Evaluation Criteria - Create a clearly defined list of quantifiable and/or qualitative measures for project evaluation.*
- Collect Data - Prepare a scope, preliminary estimate, and graphic representation of each project. Provide supplementary data for evaluation criteria.*
- Evaluate Projects - Measure and rank each project based upon evaluation criteria and supporting data.*
- Draft Plan - Compile a working document for review and refinement.
- Review Draft Plan - Gain input and comments from stakeholders.
- TIP Adoption - Board of County Commissioner approval.
- Assess Plan - Continual refinement and improvement of plan and development process.

* This step is executed on even years only.

PUBLIC INVOLVEMENT PROCESS

An important component of the Transportation Improvement Program is to provide the public with the opportunity to provide input into the development of the program. The purpose of the Public Involvement Program is to reflect public consensus on allocating resources for transportation capital improvements. Clark County Public Works coordinates with a cross-section of community members, representing a variety of different interests, to identify general and specific community sentiment on issues relating to the transportation needs of the community.

The Public Involvement Process is based on a biennial cycle. During odd-numbered years, the public involvement process is limited to individual contacts from the public and the Public Hearing to adopt the TIP. A full involvement process is undertaken during even-numbered years, which includes the identification of potential TIP projects, review of the project evaluation system, and recommendation for approval to the County Engineer.

The following is a summary of the public outreach efforts that occur during the even-numbered years:

- Two community open houses
- Four Transportation Improvement Program Involvement Team meetings
- Organized presentations to neighborhood and business associations
- Internet web site
- Current TIP and map displayed in the Vancouver Library
- Press releases and newspaper advertisements

The focal point of the public involvement process is the Transportation Improvement Program Involvement Team (TIPIT). The TIPIT consists of a group of approximately 30 citizens and County Staff, representing a wide range of views and backgrounds. The role of the TIPIT is to assist the County with identifying projects, refining the project evaluation criteria, developing the project priority array, reviewing the draft TIP, and recommending a program to the County Engineer.

PROJECT IDENTIFICATION

Capital Improvement Projects

Projects within the Transportation Improvement Program include new roadways, roadway widening, bridges, and pedestrian and bicycle facilities. With the exception of the Ongoing Programs, we currently identify new projects on a biennial cycle, concurrent with the public involvement process. With few exceptions, no capital improvement projects are considered without ample opportunity for public input.

Ongoing Programs Projects

The Ongoing Programs Projects were established to address the completion of minor improvements and small-scale projects in specific categories. These programs consist of:

- Transportation Safety Improvement Program
- Environmental Impact Mitigation Program
- Neighborhood Traffic Management Program
- Un-programmed/Advanced Right-of-way Purchases Program
- Road Preservation Program

See the ongoing programs detail sheets for a description of each of the ongoing programs.

Projects within the ongoing programs are brought forward by citizens and staff throughout the year as needs are identified. Projects considered for funding under the Transportation Safety Improvement Program are taken from the Roadway Conditions inventory which is updated annually.

PROJECT EVALUATION SYSTEM

Project evaluation is performed on a biennial cycle during even-numbered years, concurrent with the public involvement process and applies only to the capital improvement projects, not the ongoing programs. Occasionally, a project may bypass the ranking process due to an emergency situation or to develop a regionally significant project in conjunction with an adjoining agency (i.e. WSDOT or City of Vancouver).

The evaluation system is designed to provide an objective means to evaluate projects and rank them accordingly. Listed below are the nine (9) measurement criteria that form the basis of the evaluation system:

- Safety (considering both collision data and exposure)
- Comparison to the Arterial Atlas
- Concurrency
- Multimodal
- Route Connectivity
- Environmental Impacts
- Public/Agency Support
- Support for Economic Development
- Leveraging of Outside (non-County) Funding

Based upon the established evaluation criteria, a weighted scoring system measures and assigns a numbered rank to each project. The system recognizes safety, mobility, and future development potential as the most important considerations in the ranking of projects. The system is outlined on the following pages:

EVALUATION CRITERIA

Safety (Maximum Score = 30, Weight = 1)

The safety criteria consider two significant measures of safety for a potential project. The first measure, or *collision score*, assigns points to a project based on actual collision history. The second measure, referred to as the *exposure score*, quantifies the sub par conditions that the project is intended to address.

Collision History:

The collision index considers the accident rate and the critical accident rate within the limits of each project. The *accident rate* is the total number of accidents per million vehicles traveling through the project area. The *critical accident rate* is the rate expected due to normal variation. The *collision index* is the ratio of the accident rate to the critical rate. An index greater than one indicates that the intersection or corridor experiences more collisions than expected under normal conditions.

Accident rates are calculated according to the type of project under consideration as follows (Note: ADT = Average Daily Traffic):

$$\text{Corridor Accident Rate} = \frac{\text{Total \# of Accidents} \times 10^6}{\text{Segment Length} \times \text{ADT} \times \text{Years} \times 365}$$

$$\text{Intersection Accident Rate} = \frac{\text{Total \# of Accidents} \times 10^6}{\text{ADT Entering} \times \text{Years} \times 365} \quad (\text{for intersection projects only})$$

The critical rate is calculated from the following formula:

$$\text{Critical Rate} = \bar{R} + k \times \sqrt{\frac{\bar{R}}{m}} + \frac{1}{2 \times m}$$

Where:

$$\bar{R} = 2.12 \text{ for segment}$$

$$\bar{R} = 0.80 \text{ for intersections}$$

$$k = 1.645 \text{ (constant)}$$

$$m = \text{ADT} \times \text{Years} \times 365 \times \text{Length} / 10^6$$

The collision index is then calculated:

$$\text{Collision Index} = \frac{\text{Accident Rate}}{\text{Critical Rate}}$$

Finally, the collision portion of the safety score is determined from the following scale:

<u>Collision Index</u>	<u>Collision Score</u>
◇ equal to or greater than 1.45	65
◇ equal to 1.20	40
◇ equal to 1.0	20
◇ equal to .5	10
◇ equal to 0	0

Exposure:

The exposure score is a summation of several measures regarding the existing conditions in the field. Once those conditions are measured, the score is modified by the exposure index to account for the number of vehicles actually exposed to those conditions.

<u>Exposure Measure</u>	<u>Score</u>
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Existing Shoulder Widths:

◇ Between 0 and 1 foot wide	5
◇ Between 1 and 2 feet wide	3.75
◇ Between 2 and 4 feet wide	2.50
◇ Between 4 and 8 feet wide	1.25
◇ Greater than 8 feet wide	0

Fixed Objects Adjacent to the Roadway (average number of objects per 100 feet of roadway):

◇ 4 or more objects per 100 feet of roadway	5
◇ Between 3 and 4 objects per 100 feet of roadway	3.75
◇ Between 2 and 3 objects per 100 feet of roadway	2.50
◇ Between 1 and 2 objects per 100 feet of roadway	1.25
◇ 0 objects per 100-feet of roadway	0

Roadside Drop-off (distances from edge of roadway to bottom of hill, gully, etc.):

◇ 30 feet and greater	5
◇ Between 20 and 30 feet	3.75
◇ Between 10 and 20 feet	2.50
◇ Between 1 and 10 feet	1.25
◇ Less than 1 foot	0

Bike Lanes (widths of existing bike lanes in urban area or shoulders in rural area; separated paths may be considered wider than actual):

◇ Between 0 and 2.5 feet	5
◇ Between 2.5 and 4 feet	3
◇ Between 4 and 5 feet	1
◇ 5 feet or more	0

Sidewalks (existing sidewalks or walkways along project corridor):

- | | |
|--|------|
| ◇ No existing sidewalks (shoulders for rural projects) | 5 |
| ◇ Some existing sidewalks (at least 65%) | 2.50 |
| ◇ Existing sidewalks along full length of project | 0 |

Pedestrian Safety:

- | | |
|---|---|
| ◇ Includes frontage to a school, park, or other high-volume source of pedestrian or bicycle use | 5 |
| ◇ Directly serves a school or other high-volume source of pedestrian or bicycle use | 3 |

Other Issues (horizontal/vertical alignment, sight distance, intersection alignment)

- | | |
|--|---|
| ◇ Existing alignment, sight distance deficiencies | 5 |
| ◇ No existing alignment, sight distance deficiencies | 0 |

$$\text{Exposure Index} = \left(\frac{\text{AADT}}{1,000} \right) \leq 1.0 \quad (\text{maximum value of 1})$$

Exposure Score = Exposure Index x Sum of Exposures (maximum score = 35 points)

Raw Safety Score = Collision Score + Exposure Score (maximum score = 100 points)

There is a maximum of 100 points that a project can accrue from the eight elements in the safety category as previously shown (65 points for collision history and 35 points for exposure). Once a project has been scored against these elements and a score total has been derived, the project is assigned a final score for the safety criteria as follows:

$$\text{Final Safety Score} = \text{Safety Score} \times \left(\frac{30}{100} \right)$$

Comparison to County Arterial Atlas (Maximum Score = 5, Weight = 2)

Comparison of project's existing roadway section with section specified in the County Arterial Atlas:

- | | |
|---|---|
| ◇ Requires additional travel lanes | 1 |
| ◇ Requires center/left-turn lane | 2 |
| ◇ Requires sidewalks (shoulders for rural) | 1 |
| ◇ Requires bike lanes (shoulders for rural) | 1 |
| ◇ Other projects | 0 |

Concurrency (Maximum Score = 10, Weight = 1.5)

Concurrency standards are measured in terms of "average travel speed" for corridors (measured by standards set forth in Chapter 12.41, Transportation Concurrency Management System), and Level of Service (LOS) for intersections (LOS measured by standards set forth in the Highway Capacity Manual, with LOS E indicating failure):

- | | |
|---|---|
| ◇ The project will improve one or more intersections of regional significance that are: | |
| ◇ Failing | 6 |
| ◇ Within 10% of failing | 4 |
| ◇ The project will improve an adopted concurrency corridor that is: | |
| ◇ Failing (below the threshold corridor speed) | 3 |
| ◇ Within 3 mph of failing | 2 |
| ◇ The project will improve conditions in an adopted transportation moratorium area | 1 |
| ◇ Does not address any concurrency or LOS concerns | 0 |

Multimodal (Maximum Score = 6, Weight = 1)

Transit or bike/pedestrian system improvements (note that addition of bike lanes and sidewalks is included in the "Comparison to County Arterial Atlas" criteria above):

- | | |
|--|---|
| ◇ Completes missing links in existing bike/pedestrian system | 2 |
| ◇ Improves access to a Park & Ride Facility | 2 |
| ◇ Improves the operation of a C-TRAN route within project limits | 2 |

Route Connectivity (Maximum Score = 5, Weight = 2)

Project's link with other arterial and collector routes:

- | | |
|--|---|
| ◇ Project is linked to primary route (arterial or above) <u>AND</u>
secondary route (collector) | 3 |
| OR | |
| ◇ Project links two primary routes | 2 |
| OR | |
| ◇ Project links two secondary routes | 1 |
| ◇ Gap project | 2 |
| ◇ Other projects | 0 |

Environmental Mitigation (Maximum Score = 6, Weight = 1)

Based upon preliminary review by County staff, each project will be given a score of 6 and then points will be deducted, based on the following impacts types (lowest possible score = 0):

- | | |
|--|-----|
| ◇ No significant impacts anticipated | 0 |
| ◇ Low category wetland impact (roadside ditches, Category 4 wetlands) | (3) |
| ◇ Medium category wetland impact (cumulative impacts/Category 2, 3 wetlands) | (4) |
| ◇ High category wetland impact (Category 1 wetlands includes ESA impacts) | (5) |
| ◇ Stream impact (with or without wetland impact) | (3) |
| ◇ Shoreline impact (with or without wetland impact) | (2) |
| ◇ Wetland/habitat fragmentation impact | (6) |

Public and Outside Agency Support (Maximum Score = 2, Weight = 1):

- | | |
|--|---|
| ◇ Supported by the Regional Transportation Council, State Transportation Plan, or surrounding cities | 1 |
| ◇ Supported by the Public (TIPIT, adopted neighborhood circulation plan) | 1 |
| ◇ No known support by public or local agencies | 0 |

Support for Economic Development (Maximum Score = 15, Weight = 1)

The number of potential future jobs used for scoring the projects is determined as follows:

1. The following property within one half-mile of the project limits is determined using GIS data:

For vacant industrial property:

Primary	13 jobs/gross acre
Secondary	13 jobs/gross acre
Tertiary	6.5 jobs/gross acre

For commercial property:

Vacant	15 jobs/gross acre
Under-utilized	15 jobs/gross acre
Vacant with critical	15 jobs/gross acre

2. The potential future jobs are calculated by multiplying the total acreage times the job/gross acre. Values for jobs/gross acre (shown above) are based on adopted land use planning criteria for Clark County. Those values take into account loss of land to infrastructure and environmental constraints.
3. The potential future number of jobs in the area is then used to determine the score.
 - ◇ Improves access to or is within an adopted industrial node or a CREDC Node of Growth¹: 5
 - ◇ Potential future industrial jobs within half-mile of project:
 - ◇ 1,250 or more 7
 - ◇ 1,000 to 1,249 5
 - ◇ 750 to 999 3
 - ◇ 250 to 749 1
 - ◇ Potential future commercial jobs within half-mile of project:
 - ◇ 800 or more 3
 - ◇ 450 to 799 2
 - ◇ 250 to 449 1
 - ◇ Other projects 0

¹ CREDC, *The Economic Development Strategic Plan for Clark County*, 2002

Leveraging of Non-County Funding (Maximum Score = 6, Weight = 1)

State/Federal grant sources, regional, municipal, or other non-county funds:

◇ 80% outside funds available	6
◇ 70% outside funds available	5
◇ 60% outside funds available	4
◇ 50% outside funds available	3
◇ 10% outside funds available	2
◇ No funds committed	0

The scores within each criterion are multiplied by the weighting factor to give a total score for the criteria. The sum of the nine criteria scores result in a total score and ranking for the project. Refer to the attached Priority Array for project specific scoring and ranking information.

The outcome of the scoring/ranking process defines the priority for each project. The resulting Priority Array is used as the starting point to decide which projects are funded in the next six years.

In past years, there was concern expressed as to the rationale for evaluating and ranking projects that are currently underway. The concern is that these projects have previously been evaluated and targeted for completion, thereby obligating the County to finish the project. In order to address this issue, the TIPIT recommended removing these projects from the ranking order.

To separate those projects, an "Obligated" category was created. If a project has 10% or greater of its programmed budget already expended, the project is considered to be one that the County is committed to completing and therefore is assigned an "obligated" status. The expending of 10% or greater of a project's budget generally indicates that, at a minimum, the engineering is well underway and the project has entered the right-of-way phase.

Projects are moved into the obligated category only during even-numbered years. Obligated projects are listed alphabetically and assigned a letter rank in that order. The letter rank does not indicate priority in any way.

PROGRAMMING CONSIDERATIONS

After the priority array was established, available program dollars were assigned to projects in the following manner to reflect the project rank:

- Projects were listed in priority order.
- Grant funds that have been secured were programmed by year and phase, in accordance with the granting agencies' direction.
- County Road Fund and/or Traffic Impact Fee (TIF) funds were programmed to complete those projects to match the grants.
- TIF revenues were then assigned to projects within the appropriate TIF sub-areas. Because of the difference in revenues projected for each sub-area, some projects received funding before other projects listed ahead of them in the priority array.
- Some projects that depend solely on county road funds were delayed in order to keep projects with grant funds moving forward. Most grant-funded projects must adhere to strict schedules.

The Six-Year Program Matrix only displays those projects that have funding in at least one phase of the project during the next six years.

TITLE VI COMPLIANCE

Clark County operating policies reflect official commitment that there shall be opportunity, free from discrimination, for all persons. The policy refers to employment, the provision of all County services, and services of its contractors. The County's practices of non-discrimination are consistent with Title VI and VII of the 1964 Civil Rights Act, as amended.

Federal and state grants require that the County, its contractors, subcontractors, and other sub-recipients who receive federal funds actively ensure non-discrimination in all of their programs and activities. These obligations apply even if those other programs and activities are not federally funded. It is County policy to afford all bidders an equal opportunity to quote and compete on equal terms. Disadvantaged Business Enterprises (DBE) is encouraged to respond to every applicable contracting opportunity. The County will ensure all businesses a realistic opportunity to participate in the County's purchasing processes, fairly and competitively.

If you have questions about the federal funding process, you are encouraged to contact the Public Works Department at (360) 397-6118.